

In the Claims:

✓
Cancel claim 1 in its entirety.

C1 Sub 7 E1
2. (Amended) The metallurgical structure in claim 6, wherein said same material comprises copper.

3. (Amended) The metallurgical structure in claim 6, wherein said barrier layer comprises one or more layers of Ti, TiN, Ta, and TaN.

4. (Amended) The metallurgical structure in claim 6, wherein said barrier layer and said metal plug prevent elements within said solder bump from diffusing to said metal line.

Sub E1 ✓
C2
6. (Thrice Amended) A metallurgical structure comprising:
a passivation layer;
a via through said passivation layer extending to a metal line within said metallurgical structure;
a barrier layer lining said via;
a metal plug in said via above said barrier layer, wherein said metal plug and said metal line comprise a same material, and wherein said metal plug, said barrier layer and said passivation layer form a planar exterior surface of said metallurgical structure; and
a solder bump formed on said planar exterior surface;
wherein said solder bump is in direct contact with said metal plug.

7. (Amended) The metallurgical structure in claim 6, further comprising a second barrier layer above said metal plug and a second metal plug above said second barrier layer, said second metal plug being in direct contact with said solder bump.

Cancel claim 8 in its entirety.

Sub F17
C3
9. (Amended) The integrated circuit structure in claim 13, wherein said same material comprises copper.

10. (Amended) The integrated circuit structure in claim 13, wherein said barrier layer comprises one or more layers of Ti, TiN, Ta, and TaN.

Sub E2
11. (Amended) The integrated circuit structure in claim 13, wherein said barrier layer and said plug prevent elements within said connector from diffusing to said components.

C4
13. (Thrice Amended) An integrated circuit structure comprising:
internal components within an exterior covering;
a via extending through said exterior covering to said internal components;
a barrier layer lining said via;
a plug in said via above said barrier layer, wherein said plug and said internal components comprise a same material, and wherein said plug and said barrier layer form a planar exterior surface of said integrated circuit structure; and
a solder bump connector formed on said planar exterior surface;
wherein said solder bump connector is in direct contact with said plug.

14. (Amended) The integrated circuit structure in claim 13, further comprising a second barrier layer above said plug and a second plug above said second barrier layer, said second plug being in direct contact with said solder bump connector.

Please add new claims 22-28, as follows:

Sub F17
22. The integrated circuit structure of claim 13, wherein said solder bump connector is comprised of a lead/tin alloy.

23. A metallurgical structure, comprising:
 a first layer of copper on a substrate;
 a barrier layer on said first layer of copper;
 a second layer of copper formed on said barrier layer; and
 a conductive structure that includes a given species, at least some of said given species diffusing from said conductive structure, said second layer of copper having a thickness sufficient to at least partially consume said species diffusing from said conductive structure, and to adhere to said conductive structure.

24. The structure of claim 23, wherein said conductive structure comprises a solder ball.

25. The structure of claim 24, wherein said given species comprises tin.

26. The structure of claim 24, wherein said solder ball comprises a lead/tin alloy.

27. The structure of claim 24, wherein said barrier layer is selected from the group consisting of Ti, TiN, Ta, Tan, and combinations thereof.

28. The structure of claim 24, wherein said second layer of copper has an upper surface that is substantially coplanar with surrounding insulative structures.

Sub
F1